JUNIPER MOUNTAIN COMPLEX FIRES (M-200)
EMERGENCY STABILIZATION AND REHABILITATION PLAN
(EA OR-010-2001-07)

DECISION RECORD (DR)
AND
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Decision Record

Background: On August 9, 2001, lightning ignited the Big Juniper Fire burning approximately 81,675 acres of public land and 892 acres of private land within the following grazing allotments: Little Juniper Spring (#1000), Big Juniper Mountain (#0515), Corn Lake (#0514), NE Warner (#0511), and Bar 75 Ranch FRF (#1002) located in eastern Lake County and western Harney County. The fire started on the southeast slope of Big Juniper Mountain, burning in a northeasterly direction across Big Juniper Mountain. It was then driven by wind eastward across Dry Valley and Mule Springs Valley and stopped one mile west of Open Valley, 25 miles from the point at which it first started. It was declared controlled on September 3, 2001.

On August 9, 2001, lightning ignited the Jump Fire burning 1,576 acres of public land within the Coleman Seeding Allotment (#432) and 751 acres of state land in the Coleman Hills area of eastern Lake County.

On August 11, 2001, lightning ignited the Mustang Fire and the Horsehead Fire. The Mustang Fire burned 3,031 acres of public land within the Little Juniper Spring Allotment (#1000) and 2,334 acres of state land. The Horsehead Fire burned 42 acres of state land. Both of these fires are located in the Horsehead Mountain area in western Harney County.

Decision: After consideration of the analysis of impacts and mitigating measures of the proposed action (preferred alternative) and other alternatives, my decision is to implement the proposed action as follows:

Rangeland drill seed approximately 4,000 acres and aerial seed approximately 3,350 acres of public land. The seed mixes contain native and nonnative grasses, forbs, and shrubs adapted to the specific ecological sites present. The construction of 29 miles of permanent protection fence will function as pasture fences for future management and remain in place after rehabilitation objectives are met. All treated land will be rested from livestock grazing for a minimum of two growing seasons. Four wildlife guzzlers will be replaced. Total funding requested for this rehabilitation is $1,123,090.

Other alternatives considered included Alternative 1: No Action: Continue current management and Alternative 2: No seeding, build protection fence only.

Rationale: The proposed action will provide a perennial vegetation cover of native and non-native grasses, forbs, and shrubs. These species will compete with cheatgrass and other exotic

annuals and occupy the site which will discourage noxious weed invasion. The result will be a more diverse vegetation community. The establishment of these vegetation communities will inhibit reoccurring wildfires and lessen the potential for a catastrophic wildfire in this Wyoming big sagebrush/cheatgrass zone. The establishment of perennial vegetation communities will lessen the potential for soil erosion. Once the site has an established perennial vegetation community it will, over time, progress toward a native Wyoming sagebrush/bunchgrass community.

The construction of permanent protection/pasture fences, compared to an alternative of construction of all temporary protection fences, within the burned area was determined to be the most economical. These fences will protect the seeded areas and natural recovery areas until objectives are met and will help accomplish allotment objectives for future management.

Effective Date: This decision is in full force and effect as of October 25, 2001.

Appeal Process: Any person who is adversely affected by this decision may file an appeal within 30 days from receipt of this decision in accordance with 43 CFR, Part 4. Any request for a stay of this decision in accordance with CFR Part 4.21 must be filed with the appeal.

Finding of No Significant Impact

The Lakeview District, BLM, has analyzed a proposal and several alternatives for emergency stabilization and rehabilitation of BLM lands recently burned in the Juniper Mountain Complex Fires (M-200) located within the Lakeview Resource Area. The High Desert and Warner Lakes MFPs, as amended (1983, 1989, and 1995) are silent on the issue of reseeding following wildfire. However, the MFPs and the Lakeview Grazing Management FEIS/ROD (1982) cover the impacts of construction of protective fencing. These documents may be reviewed at the Lakeview District Office. More recently, national wildfire rehabilitation policy has been formally developed in the BLM Emergency Fire Rehabilitation Handbook (1998) and a native seeding policy has been developed through executive order.

The design features and the recommended mitigation measures identified in the attached EA would assure that no significant adverse impacts would occur to the human environment. The following resource values either are not present in the project area or would not be impacted by any of the alternatives considered: air quality, prime or unique farmlands, flood plains, wetlands or riparian zones, water quality, American Indian religious or traditional use areas, hazardous or solid wastes, visual resources, wild and scenic rivers, wilderness study areas, wild horses, paleontological resources, lands, fisheries, minerals, or low income/minority populations.

Those adverse effects identified are minimal and of short duration with no significant secondary, indirect, or cumulative impacts. They are as follows:

a) soil disturbance

b) a minimum of two growing seasons disruption to livestock operator's normal operation in the Little Juniper-Spring, Big Juniper Mountain, Corn Lake, Northeast Warner, Bar 75 Ranch FRF, and Coleman Seeding Allotments.

c) fencing could have minimal effects to wildlife species; occasional direct mortality of pronghorn antelope, deer, and sage-grouse can occur

Determination: On the basis of the information contained in the EA and all other information available to me, as summarized above, it is my determination that none of the alternatives analyzed constitutes a major Federal action affecting the quality of the human environment Therefore, an EIS is unnecessary and will not be prepared.

/s/ Ron R. Florence

Field Manager
Lakeview Resource Area

10/22/01

Date

JUNIPER MOUNTAIN COMPLEX FIRES(M-200)

EMERGENCY STABILIZATION AND REHABILITATION PLAN
AND
ENVIRONMENTAL ASSESSMENT
OR-010-2001-07

Bureau of Land Management
Lakeview District Office
Lakeview Resource Area
HC 10 Box 337
Lakeview, OR 97630

October 15, 2001

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Juniper Mountain Complex (M-200)
(Big Juniper, Jump, Mustang, and Horsehead Fires)

Emergency Stabilization and Rehabilitation Plan
and
Environmental Assessment
OR-010-2001-07

CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

In August of 2001 the Bureau of Land Management (BLM), Lakeview District, experienced a high frequency of lightning strikes from numerous storm cells resulting in many wildfires. This rehabilitation plan and environmental assessment will deal with four of these wildfires: Big Juniper, Jump, Mustang, and Horsehead Fires.

1. On August 9, 2001, the Big Juniper Fire was ignited by lightning and eventually burned approximately 81,675 acres of public land and 892 acres of private land within the following grazing allotments: 22,740 acres in Little Juniper Spring (#1000), 4,565 acres in Big Juniper Mountain (#0515), 17,868 acres in Corn Lake (#0514), 35,704 acres in NE Warner (#0511), and 1,690 acres in Bar 75 Ranch FRF (#1002) located in eastern Lake County and western Harney County. The fire started on the southeast slope of Big Juniper Mountain, burning in a northeasterly direction across Big Juniper Mountain. It was then driven by wind eastward across Dry Valley and Mule Springs Valley and stopped one mile west of Open Valley, 25 miles from the point at which it first started. It was declared controlled on September 3, 2001.

The elevation of the Big Juniper Fire ranges from 4,500 feet to 6,600 feet. The topography varies from steep slopes on mountains and rims to deep, narrow canyons to gently sloping hills and valley bottoms. The area receives approximately 10 inches of precipitation annually, with most of the precipitation occurring March through June. The wet period is followed by the driest period (July, August, and September) and the greatest chance of thunderstorms with lightning. Summer precipitation is minimal and is insufficient for significant for plant growth.

At the time of the fire, the land supported plant communities of: a) Juniper forest/idaho fescue/bluebunch wheatgrass/bottlebrush squirrel tail, b) Low sagebrush/bottlebrush squirreltail/sandberg bluegrass, c) Wyoming big sagebrush/thurber's needlegrass/ bottlebrush squirreltail. On portions of this landscape where fires have been more recent, the plant community was comprised of green rabbitbrush/bottlebrush squirreltail/blue bunch wheatgrass/cheatgrass.

2. On August 9, 2001, the Jump Fire was also ignited by lightning and burned 1,576 acres of public land within the Coleman Seeding Allotment (#432) and 751 acres of state land in the Coleman Hills area of eastern Lake County. The elevation of the burned area is 5,500 feet and the topography varies from steep slopes on rims to moderately sloping hills. The area receives approximately 10 inches of precipitation annually, with most of the precipitation occurring March through June. The wet period is followed by the driest period (July, August, and September) and the greatest chance of thunderstorms with lightning. Summer precipitation is minimal and is insufficient for significant plant growth.

At the time of the fire, the land supported an upland plant community of green rabbit-brush bottlebrush squirreltail/blue bunch wheatgrass/cheatgrass due to previous fires and crested wheatgrass seeding at the lower elevations.

3. On August 11, 2001, lightning ignited the Mustang Fire and the Horsehead Fire. The Mustang Fire burned 3,031 acres of public land within the Little Juniper Spring Allotment (#1000) and 2,334 acres of state land. The Horsehead Fire burned 42 acres of state land. Both of these fires are located in the Horsehead Mountain area in western Harney County. The elevation of the burned area varies from 4,800 feet to 5,800 feet and the topography varies from steep and moderately sloping mountains to gentle sloping hills. The area receives approximately 10 inches of precipitation annually, with most of the precipitation occurring March through June. The wet period is followed by the driest period (July, August, and September) and the greatest chance of thunderstorms with lightning. Summer precipitation is ineffective for plant growth.

At the time of the fire, the land supported the same plant communities as the area burned in the Big Juniper Fire.

B. Purpose and Need

The purpose of this project is to actively rehabilitate portions of the burned areas by restoring vegetation and stabilizing the site, and to protect the remainder of the burned area so that natural revegetation can occur.

Fires which have previously burned in these areas have been invaded by cheatgrass, a nonnative species, which necessitates rehabilitating a portion of the burned area to ensure a perennial plant cover and long-term ecosystem integrity and productivity. Additionally, noxious weeds are increasing in the surrounding area and opportunities for weed establishment would be much greater without planting competitive desirable vegetation. If the burned area is not treated, cheatgrass would likely dominate the plant community. The likelihood of the area burning again is greater with increased levels of cheatgrass. Adjacent areas of sagebrush are also at a greater risk of fire due to the possible increased levels of flammable cheatgrass components.

C. Relationship to Planning/Conformance with Land Use Plans

The High Desert and Warner Lakes MFPs, as amended (1983, 1989, and 1995) are the current land use plans for the area. These plans are silent on the issue of wildfire rehabilitation. However, the fencing component of the proposed action is considered within the MFPs and the Lakeview Grazing Management FEIS/ROD (1982).

The Carlson-Foley Act (Public Law 90-583), as well as state and county laws, make the Federal government responsible for control of weeds on Federal land and provides direction for their control. The Lakeview District operates under the weed protocols set forth in the following documents: Vegetation Treatment on BLM Lands in Thirteen Western States Final Environmental Impact Statement and Record of Decision (1991), and the Supplement to the Northwest Area Noxious Weed Control Program Final Environmental Impact Statement and Record of Decision (1987), and the Integrated Noxious Weed Control Program Environmental Assessment (1994).

The proposed action is in conformance with these land use plans and the BLM Emergency Stabilization and Rehabilitation (ESR) Plan (1998).

CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. Proposed Action (Preferred Alternative;see attached maps)

1. The Big Juniper Fire burned within several ecological sites on and around Big Juniper Mountain and 25 miles to the east which, for the most part, would recover with natural re-vegetation provided there is adequate rest from livestock grazing. The proposed action for the Big Juniper Fire is to aerially apply a Wyoming big sagebrush/perennial grass seed mixture to 2,700 acres on Juniper Ridge in the Northeast Warner Allotment (#511). Approximately 4,000 acres in the Dry Valley area in the Little Juniper Mountain Allotment (#1000) would be seeded with a rangeland drill, using a Wyoming big sagebrush/perennial bunch grass seed mixture. (See Appendix 2.) Rehabilitation would be completed on 15 miles of bulldozer fire lines in the form of constructing water bars on steeper slopes, leveling piled-up soil and debris, and seeding the disturbed area. Fire suppression funding would be used to fund bulldozer line rehabilitation.

The proposed aerial seed mix for Juniper Ridge is: Wyoming big sagebrush/forage kochia/bottlebrush squirreltail/blue bunch wheatgrass/Idaho fescue/basin wildrye. The proposed drill seed mix for Dry Valley is: Wyoming big sagebrush/bottlebrush squirreltail/blue bunch wheatgrass/crested wheatgrass/ thurber needlegrass/basin wildrye/forbs/triticale. The Wyoming big sagebrush seed for the Dry Valley area will be applied aerially after the grass seed mixture has been drilled. The rangeland drill seed mix would also be used for seeding the bulldozer lines minus the crested wheatgrass.

These are the preferred species to be put into the mixes, depending on availability. These mixes have been adapted to the site potential with native species being dominant. Naturalized species, such as hycrest crested wheatgrass, would be included in the drill mix because of possible cheatgrass competition and the need to establish a perennial vegetation cover to stabilize the site. The seed mixes are based on the condition of the existing vegetation prior to the fire and expected success of the seeded species. The drill seed mix would include a variety of forb species. Possible species to be included will be lewis flax, yarrow, lupine, and petalostema of the pea family depending on availability.

The burned area in the Big Juniper, Corn Lake, Little Juniper Spring, and Northeast Warner Allotments would require construction of 25.5 miles of permanent 3-strand barbed wire protection fence (bottom strand smooth) to provide rest from livestock grazing for two growing seasons during the natural recovery process of the burned area. The fences would be retained as pasture fences to continue management following the rest cycle from livestock grazing. The BLM would provide the materials and contract for the construction. District standard design specifications would be used for the fences which identify wire spacing measurements and the use of solid color green fenceposts. Approximately 3.5 miles of permanent fencing in the Dry Valley pasture of the Little Juniper Spring Allotment (#1000) would not be funded by ESR funding. Three cattleguards would be placed on major roads which pass through and around the burned area. These would prevent gates from being left open allowing livestock into the rehabilitation area. Two of these cattleguards would be funded out of ESR funding.

To protect natural resources in the burned area within the proposed Juniper Mountain ACEC (approximately 2500 acres), vehicle use would be limited to existing roads and trails; no cross-country vehicle use would be allowed. Signs would be posted along the main access roads to the area advising visitors of the vehicle restriction, and an emergency off-highway vehicle (OHV) notice would be published in the Federal Register. This restriction would remain in effect until the completion of the Lakeview Resource Management Plan (RMP) (scheduled for completion in 2002), which would specify the long-term vehicle designation for the proposed ACEC.

Four wildlife guzzlers would be replaced that were damaged or destroyed in the Big Juniper Fire.

2. The proposed action for the Jump Fire is to aerially apply a Wyoming big sagebrush/perennial grass seed mixture to approximately 650 acres within the Triangle pasture of the Coleman Seeding Allotment (#432). The seed mix is the same as the Juniper Ridge aerial application area of the Big Juniper Fire and is based on the condition

of the existing vegetation prior to the fire and expected success of the seeded species (see Appendix 2).

Approximately 3.5 miles of 3-strand barbed wire permanent fencing would be built for managing the remaining unburned forage in the allotment and would be retained as pasture fences after the burned area has received two growing seasons of rest from livestock grazing. This portion of permanent fencing would not be funded by ESR funding. The BLM would provide the materials and contract for the construction. District standard design specifications would be used for the fences which identify wire spacing measurements and the use of solid color green fenceposts.

3. The proposed action for the Mustang Fire within the Little Juniper Spring Allotment (#1000) and the Horsehead Fire is to allow natural revegetation to occur with adequate rest from livestock grazing and to rehabilitate 3 miles of bulldozer fire lines in the form of constructing water bars on steeper slopes, leveling piled-up soil and debris, and seeding the disturbed area with the same seed mix developed for the rangeland drilling area in the Big Juniper Fire minus the crested wheatgrass (see Appendix 2). Fire suppression funding would be used to fund bulldozer line rehabilitation.

Approximately 3.5 miles of 3-strand barbed wire protection fence (bottom strand smooth) would be built to provide rest from livestock grazing for two growing seasons during the natural recovery process of the burned area. The fence would be retained as a pasture fence to continue management following the rest cycle from livestock grazing. The BLM would provide the materials and contract for the construction. District standard design specifications would be used for the fence which identify wire spacing measurements and the use of solid color green fenceposts.

4. To discourage introduction of noxious weeds into the Juniper Mountain Complex rehabilitation areas, equipment used for seeding such as rangeland drills, tractors, all-terrain vehicles, and other vehicles would be cleaned of vegetative material (seed, debris, etc.) before working on-site. All seed purchased for this fire rehabilitation project would be subjected to an all states noxious weed test by a certified seed testing facility. No noxious weed seed would be tolerated. If any noxious weed seed is found the lot would be rejected. Noxious weeds could be introduced at any time, therefore areas of high susceptibility would require repeat inventorying, treatment, and monitoring on an annual basis. Inventorying for noxious weeds would begin FY 2002 and continue through FY 2003. If noxious weeds are found, appropriate control treatments would be developed and applied in FY 2002 and 2003. Noxious weed sites would be monitored following treatments through 2004.

5. Cultural resource inventories would be completed within the burned area proposed for seeding with a rangeland drill prior to any drilling. This would encompass approximately 4,000 acres in the Dry Valley area of the Little Juniper Allotment (#1000). Cultural resource inventories would also be completed on the proposed 40 miles of temporary and permanent fence prior to any fence construction taking place.

6. Monitoring of the rehabilitation areas in the Juniper Mountain Complex fires would be

monitored for a minimum of three growing seasons to determine if rehabilitation objectives are being met. Rangeland monitoring will include established upland trend plots and use supervision. Additional photo points and plots of sufficient dimension will be set up in the drilled and aerial seeding areas to measure the variety and density of species seeded and assess the success or failure of seedings. The new plots would be measured for 3 years.

Photo points and aerial photo interpretation would be used to measure erosion. Soil loss and changes in drainages would be indicators of increased erosion. Noxious weeds would be inventoried, treated, and monitored FY 2002, 2003, and 2004. The ESR monitoring results would be shared at meetings at the district, state and Washington Office levels as needed.

B. Alternative 1: (No Action; Continue Current Management)

No public land would be seeded. There would be no protective fences constructed, allowing livestock to graze the burned area during the natural recovery period of the vegetation. No noxious weed or cultural resource inventories would be completed. There would be no vehicle restrictions.

C. Alternative 2: (No Seeding; Protection Fence Only)

This alternative is the minimum necessary to protect the burned areas of the Juniper Mountain Complex fires while natural recovery of vegetation takes place. The mileage of fencing would be the same for temporary and permanent protection fences as stated in the proposed action. Noxious weed and cultural resource inventories would be completed. There would be no vehicle restrictions.

D. Alternatives Considered but Eliminated from Detailed Analysis.

Two additional alternatives were considered, but eliminated from detailed analysis.
i. Drill seed with crested wheatgrass only; install protection fences. This alternative was not analyzed because Bureau policy provides direction towards using native species to the extent possible and use mixtures of seed, regardless of the species being used.

ii. Remove all livestock grazing from the affected allotments for two or more growing seasons. No seeding or fencing would occur. However, fire lines would be waterbarred and seeded, where needed. This alternative was eliminated because the threat of invasive annual vegetation and noxious weeds still exists, even without cattle grazing. There is also an impact to the economic well being of the affected permittees if cattle grazing was removed for at least two growing seasons.

CHAPTER III. AFFECTED ENVIRONMENT

The following resource values would not be affected by the proposed action or any of the alternatives: air quality, Area of Critical Environmental Concern, prime or unique farmlands, floodplains, American Indian religious concerns, hazardous or solid wastes, visual resources, water quality, wetlands or riparian zones, wild and scenic rivers, wild horses, low income/minority populations, paleontological resources, lands, fisheries, minerals, and wilderness. Those resources which are not affected will not be discussed further in this document. The following critical elements would be affected by the proposed action or alternatives.

1. Cultural Resources

The burned area of the Juniper Mountain Complex is within the Northern Great Basin culture area. Historically, the area could have been used by groups of Northern Paiute People from several areas. The most likely groups to have used the area are the Fort Bidwell Tribe and the Burns Tribe.

Very little cultural resource survey work has been done in the immediate area of the proposed project. Three small water reservoirs have been constructed upon which cultural resource surveys were completed by the BLM. One small lithic scatter was found during these surveys. Within the region, considerable work has been completed to the north and west of the area as part of university research projects. The results of work by the University of Oregon and University of Nevada, Reno, indicate that some cultural resource sites are likely in the area. It is further expected that these sites will potentially range in time from less than 100 years to 10,000 years before the present. Small campsites and lithic scatters are the most likely types of site in the area. Rock cairns, burials, hunting blinds and stone quarry sites may also be found, but are less likely. No current cultural use of the area by Native Americans is known.

Historic resources are limited to a small cabin, fences and corral on private property within the burn area. These are thought to date from some time between 1920 to 1940. One stone enclosure of unknown function and age is also known for the area, but is not within the burn area. It does not appear that cultural survey will find significant euro-american resources within the burn area.

2. Noxious Weeds

Noxious weed sites are small and not widespread in the area of the Big Juniper Fire and the Mustang and Horsehead Fires. Mediterranean sage, hoary cress, bull thistle, musk thistle, and Canada thistle have been reported in this area and are under treatment.

Mediterranean Sage occurs along Abert Rim in dense stands, south and east of the Jump

Fire. Potential for invasion into the burned area of the Jump Fire is high due to prevailing south winds spreading weed seed northward from Abert Rim.

3. Special Status Species

Plants: No Special Status Plant Species are known to occur within the Jump, Mustang or Horsehead Fire areas. However, *Astragalus tegetariodes* (bastard kentrophyta) occurs in Smoke Out Canyon in close proximity to the Mustang Fire. Previous surveys have been conducted in the area for other occurrences of *Astragalus tegetariodes*, but no populations are known to exist within the burned areas. This is an unusual location for the bastard kentrophyta as it normally occurs under dry pine forests, but in the Little Juniper area it occurs under juniper and sagebrush. If the plant exists within the burn area, the long association with pine/sagebrush communities would suggest that it is not vulnerable to fire effects. Aerial planting would have no effect on the plants. Surveys will be done in 2002 to verify if the species was present prior to the burn and if present ,were they affected?

Ivesia rhypara var. *shellyi* occurs in the northern part of the Big Juniper Fire. This Bureau Sensitive plant grows on the large rocks, rocky slopes and talus of Upper Packsaddle Canyon. Some of the plants were destroyed because of the intense heat from the fire. No other populations are known to occur within the Big Juniper Fire boundaries. The proposed action does not affect this canyon, therefore, this plant population would not be affected.

Wildlife: The areas identified within the Juniper Mtn. Complex fires lie within historical Greater sage-grouse habitat, a BLM sensitive species. However, none of the acres burned were identified as crucial sage-grouse habitat. Much of the area has burned in the past, some of which is dominated by cheatgrass and rabbitbrush and is not used by sage-grouse. A portion of the area in Dry Valley identified for rangeland drilling in this plan was drilled with crested wheatgrass after the Dry Creek Fire (1985) and is essentially non-habitat for sage-grouse at this time. A portion of the burned area is dominated by invading Western Juniper which has also created unuseable habitat for sage-grouse.

4. Soils

The majority of the landscape is a tilted tableland with a sagebrush grass roof over Aridisol soils. There are pockets of deep, well-drained soils, which support Juniper woodlands. The native vegetation regulates the desert soils in this environment. The dominant soils are the Aridisols, with shallow clay pans and rock fragments in the soil profiles. They are desert soils with light colored, ochric surface layers with little organic carbon, humus accumulation. Aridisols occur on lands associated with precipitation typical of arid and semi-arid environs. Yet the clay pans indicate there is sufficient moisture to leach the nutrients and soil salts out of the surface layer and into the subsoil.

The kind and number of plants and animals has a strong regulatory effect on these desert soils. The shrubs help form dune soil deposits from playa dust, which is common through out the Great Basin. The stabilized dust deposits caught in the shrub dunes are major sources of nutrient re-supply. Without shrubs, such as Wyoming big sagebrush, the dunes are apt to re-mobilize and depress nutrient supplies. The dunes also enhance infiltration and reduce landscape scale erosion.

The erosion predictions in the Water Erosion Prediction Project (WEPP) are based on infiltration of the complex Aridisol soils. The fire produced a sea of black shrub stabs and charred grass collars. Still, no post-fire, water repellant features were observed. The soil vegetation absorbed water readily so a low runoff erosion hazard seemed likely. The WEPP was used to estimate erosion rates with a 50-year series of rainfall event with the local climate at Adel, Oregon. The results show that limited runoff erosion and sediment transport is likely with a good shrub component. This could increase if the area stays grassland.

5. Vegetation

The Big Juniper Fire burned a mixture of plant communities. Major fire effects were noted in Dry Valley and on Big Juniper Mountain. Dry Valley has never recovered the natural vegetative communities from the time of the 1986 Bacon Camp Fire; much of the area is still in cheatgrass and introduced annual weedy species. Big Juniper Mountain is being considered for a Research Natural Area/Area of Critical Environmental Concern because of the high species diversity, the old growth juniper and Oregon Natural Heritage Program's cell (5) western juniper, big sagebrush, and Idaho fescue. Although a lot of the vegetation on Juniper Mountain has been burned, the plant communities were in excellent condition prior to the fire; above 5,000 feet in elevation, they will likely recover with no rehabilitation seed planting. Possible grasses that may return to the burned area from natural seed or "crown sprouting" are Idaho fescue, bluebunch wheat grass, Great Basin rye, Sandberg bluegrass, and Thurber's needlegrass. The large amount of juniper that burned will take a long time (over 100 years) to be replaced. The disturbed areas of bull-dozer lines and other fire fighting procedures will need local planting of perennial grasses and shrubs. Some of the remaining areas were slightly burned, but had recovered from the earlier 1986 burn and are expected to recover without replanting and with little or no invasion of introduced cheatgrass and weedy annuals.

The Mustang, Big Juniper and Horsehead Fire areas contained the major vegetation type of Wyoming big sagebrush/ perennial bunch grass plant community with juniper and other shrubs at the higher elevations. The Mustang and Horsehead Fires contained widely scattered juniper, compared to the more dense population of juniper on Big Juniper Mountain in the Big Juniper Fire. Areas above 5,000 feet will likely recover without rehabilitation seed planting; however, the juniper that are burned will take a long time to be replaced.

The vegetation of the Jump Fire before the fire contained a crested wheatgrass seeding at the lower elevations which had been invaded by shrubs such as green rabbitbrush and Wyoming big sagebrush. The remaining area on BLM-administered land was a Wyoming big sagebrush and perennial bunchgrass community. A few scant fall thunderstorms have already produced a tremendous green-up of the crested wheatgrass and native bunch grasses. The burned area will likely respond well as the fire acted as a rejuvination for the aging crested wheatgrass stand. It also killed the invading shrubs. The upland plant community will recover with natural revegetation provided there is adequate rest from livestock grazing.

6. Watershed

a. The Big Juniper Fire (see attached map) is located in three hydrologic units. Land burned in the fire drain into the Summer Lake Subbasin (17120005), Warner Lakes Subbasin (17120007) and Harney-Malheur Lakes Subbasin (17120001). The watersheds effected by the fire are characterized as large closed basins. Most drainages are ephemeral and formed a long time ago when there was more precipitation. The hydrologic functions which intense fire affects include 1) infiltration, 2) storage and 3) surface erosion. Most precipitation infiltrates the soil and is stored and used by the vegetation. Some moves downslope either on the surface or subsurface to a lower elevation playa. Fire could affect these functions by increased compaction on the fire lines and increased surface erosion due to loss of vegetation. See the soils section for a discussion of surface erosion.

b. The Jump Fire (see attached map) is located in the Lake Abert Subbasin. The watershed most effected by the fire drains into the north end of Lake Abert. The drainages are ephemeral and formed a long time ago when there was more precipitation. The hydrologic functions which intensive fire affects are infiltration and soil water storage.

c. The Mustang Fire and the Horsehead Fire are located in the Summer Lake Subbasin. The drainages are ephemeral and formed a long time ago when there was more precipitation. The hydrologic functions which intensive fire affects are infiltration and soil water storage.

7. Wildlife

Portions of the burned area in the Juniper Mtn. Complex fires lie within crucial pronghorn antelope winter range and pronghorn can be found occupying the area at all times of the year. Mule deer can be found year-round within the burned area, however no crucial winter habitat has been identified. Rocky mountain elk occasionally travel through this area from the forest, however, no crucial habitat has been identified. Many sagebrush dependant species occur within the area occupying the better sagebrush habitat types.

8. Livestock Grazing Management

The Big Juniper Fire burned in portions of the following allotments: Little Juniper Spring (#1000), Big Juniper Mountain (#0515), Corn Lake (#0514), NE Warner (#0511), and FRF (#1002). The Jump Fire burned a portion of the Coleman Seeding Allotment (#432). The Mustang Fire burned a portion of the Little Juniper Spring Allotment (#1000). Table I shows a summary of these allotments with the affected permittee, licensed AUMs and season of use. Table II shows a summary of the size (acres) of each allotment and the acres burned in each allotment by fire.

Table I.

Allotment Name & Number	Permittee	Licensed AUMS	Season of Use
Little Juniper Spring #1000	Keily Brother's Ranch	2,621	03/01 - 07/22
Big Juniper Mountain #515	Warren Laird	3,621	03/15 - 10/15
Corn Lake #514	Taylor Ranch Inc	2,663	11/01 - 08/30
Northeast Warner #511	Fitzgerald Ranch Inc	1,484	02/01 - 09/30
	Con Flynn	1,774	
	Jack Flynn	1,450	
	Joe Flynn	1,450	
Bar 75 Ranch FRF #1002	Keily Brother's Ranch	73	04/01 - 12/04
Coleman Seeding #432	Tracy Land and Cattle	920	03/01 - 6/16

Table II.

BIG JUNIPER FIRE									
Allotment Name & Number	Size of Allotment (Acres)				Acres Burned				% of Allotment Burned
	Public	State	Private	Total	Public	State	Private	Total	
Little Juniper Spring #1000	116,836	0	780	117,616	22,730	0	9	27,739	24
Big Juniper Mountain #515	91,720	0	440	92,160	4,565	0	0	4,565	5
Corn Lake #514	78,476	0	1,710	209,776	17,868	0	0	17,868	9
Northeast Warner #511	139,019	0	1,680	140,699	34,821	0	883	35,704	25
Bar 75 Ranch FRF #1002	2,588	0	0	2,588	1,691	0	0	1,690	65
Total	428,639	0	4,610	562,839	81,675	0	892	87,566	

JUMP FIRE									
Allotment Name & Number	Size of Allotment (Acres)				Acres Burned				% of Allotment Burned
	Public	State	Private	Total	Public	State	Private	Total	
Coleman Seeding #432	6,000	0	0	6,000	1,576	751	0	2,327	39
Total	6,000	0	0	6,000	1,576	751	0	2,327	39

MUSTANG FIRE									
Allotment Name & Number	Size of Allotment (Acres)				Acres Burned				% of Allotment Burned
	Public	State	Private	Total	Public	State	Private	Total	
Little Juniper Spring #1000	116,836	0	780	117,616	3,031	2,334	0	5,365	5
Total	116,836	0	780	117,616	3,031	2,334	0	5,365	5

HORSEHEAD FIRE									
Allotment Name & Number	Size of Allotment (Acres)				Acres Burned				
	Public	State	Private	Total	Public	State	Private	Total	
Oregon Division of State Lands	0	0	0	0	0	42	0	42	
Total	0	0	0	0	0	42	0	42	

9. Recreation

The most frequent recreational use of the area is hunting for elk, deer, and antelope during the fall, while hiking and camping occur throughout the year, but on a limited basis. There are several primitive campsites located along the main roads in the Big Juniper Mountain area which have historically been utilized by hunters. A wilderness therapy school, authorized to conduct activities under a special recreation permit, has operated in the general vicinity of the burn area since 1998. The school typically uses this area for two months in the fall or spring. During the 2000 season of operation, the school reported 5 trips for a total of 609 user days in the Big Juniper Mountain area (609 user days = a total of 29 students x 21 days). Several big game guides are also permitted to conduct hunts within this area, but no actual use was reported for the 2000 season of operation.

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES INCLUDING CUMULATIVE IMPACTS

A. Proposed Action (Preferred Alternative)

1. Cultural Resources

Cultural resource sites such as lithic scatters could be significantly impacted by rangeland drills. Breakage, vertical and horizontal movement, and mixing of cultural deposits could be expected. If avoided during drilling by marking on the ground, these impacts would not occur. However, collection of surface artifacts from the marked sites could be a significant problem. If the diagnostic artifacts are removed from the sites as they are located, this would not be a problem. There would be no known cumulative impacts from the proposed action.

2. Noxious Weeds

Aerial seeding activities would have no effect on noxious weeds that may be present. Drill seeding, rehabilitation of bulldozer lines, cattle guard installation and fence construction activities would have little potential of introducing noxious weeds if equipment is inspected and cleaned and the seed is certified weed free, as per the protocols outlined in the Proposed Action. Drill seeding, bulldozer line rehabilitation, cattle guard installation, and fence building activities would create soil disturbance areas where weed seeds transported from outside the rehabilitation area by wind, water, wildlife, and people could establish.

Cumulative impacts of rehabilitation activities in the burned areas would be minimal. Establishment of a desirable perennial plant cover would compete with cheatgrass, which is widespread in the project area and has a high potential to invade.

3. Special Status Species

Plants: Even if weeds and cheatgrass were to increase in the fire rehabilitation areas, they would not have any significant environmental consequences or cumulative impacts on the Special Status Plant Species. The two known plant species occur on the substrates of volcanic ash or welded tuffaceous rocks and have little competition from introduced plant species. The planting of seeds for rehabilitation would have no effect on these species.

Wildlife: Sage-grouse would benefit from both the proposed aerial seeding and the rangeland drilling in the annual cheatgrass/rabbitbrush dominated areas by providing cover, structure, and forage in the form of forbs and winter sagebrush. The seed mixes of Wyoming big sagebrush/native perennial grasses and forbs would provide future habitat for sage-grouse. Shrub establishment would take 15-25 years to provide useable habitat for sage-grouse. The proposed fencing would have minimal negative impacts to sage-grouse. Sage-grouse occasionally fly into fences causing direct mortality.

4. Soils

Post-fire re-vegetation with the proposed seed mix of sagebrush and grasses would reestablish a well-rooted thatch roof, which holds the soil in place against the erosive forces of wind and water motion. The new shrubs should sustain the dune deposits, the dust catch for nutrient re-supply and associated water catchments.

The seed mixes should reestablish plant communities with diverse vegetation cover; sustain vegetation litter, and detritus nutrient cycles for ample biological production and diversity. The seeding would also buffer the lands against weed infestations.
There would be no known cumulative impacts from the proposed action.

5. Vegetation

Seeding in parts of the project areas would ensure the establishment of a perennial vegetation cover with varied species of shrubs, grasses, and forbs providing structural diversity. Above 5,000 feet natural plant communities are expected to replace themselves. Annual cheatgrass and other annual weedy species, including noxious weeds, would compete strongly during the first three years following seeding of the areas. The plant species mix, including native and naturalized species, was selected using Ecological Site Inventory data (providing potential vegetation) and for drought tolerance and germination characteristics with the potential to out-compete annual cheatgrass, other introduced annuals, and noxious weeds. These seed mixes would provide a perennial vegetative cover for soil protection, varied plant community structures, palatability for wildlife and livestock, and to enhance the sage-grouse habitat natural communities. Success of the aerial seeding of Wyoming big sagebrush/perennial grasses is dependent upon climatic conditions. Depending on the severity of the burned area, cheatgrass may invade or

expand if already present; expansion of the cheatgrass and weeds will depend on rainfall amounts this fall and early winter.

Crested wheatgrass is being supported for replanting in areas of severe disturbance (bull-dozer lines) and in the areas where previous fires have left the area high in cheatgrass and other annual weeds.

Cumulative impacts - Establishing perennial species in these burned areas and rejuvenating the previous crested wheatgrass seedings would lessen the fire return intervals in these areas. Longer fire return intervals would allow improved ecosystem function and stability.

6. Watershed

a. The proposed action for the Big Juniper Fire would allow the vegetation to recover and bring infiltration rates and soil storage to pre-burn conditions. The rehabilitation of bulldozer fire lines would decrease the amount of compaction and bring the land disturbed by the creation of fire lines to a pre-burn condition.

b. The proposed action for the Jump Fire, would allow the vegetation to recover and bring infiltration rates and soil storage to pre-burn conditions.

c. The proposed action for the Mustang and Horsehead Fires would allow the vegetation to recover and bring infiltration rates and soil storage to pre-burn conditions. The rehabilitation of bulldozer fire lines would decrease the amount of compaction and bring the land disturbed by the creation of fire lines to pre-burn conditions.

Cumulative Impacts - The cycle of fire and regrowth are part of this ecosystem. There would be no long-term or cumulative impacts, if recovery is allowed to occur.

7. Wildlife

Pronghorn, deer, and sagebrush dependant species would benefit from the proposed aerial seeding and the rangeland drilling by converting the annual cheatgrass/rabbitbrush dominated communities to communities of desirable perennial bunchgrass/forb/sagebrush types. The proposed fencing could cause direct mortality to pronghorn and deer, however, could be minimized by construction to antelope/deer specifications utilizing 3-strand barbed wire (bottom strand smooth) with 16-inch ground spacing and 12-inch minimum spacing between top two wires and maximum height of 42-inch from top wire to ground to allow antelope and deer to cross.

8. Livestock Grazing Management

The burned area of the Juniper Mountain Complex fires would be rested from livestock grazing for a minimum of two growing seasons. Following the rest period for

revegetation to occur, temporary protective fences would be removed and the normal grazing schedules for the Little Juniper Spring, Big Juniper Mountain, Corn Lake, Northeast Warner, Coleman Seeding, and Bar 75 Ranch FRF Allotments would resume.

Cumulative Impacts - There would be no known cumulative impacts from the proposed action.

9. Recreation

Because of the relatively steep slopes within the area of the proposed Juniper Mountain ACEC, limiting OHV use to existing roads and trails would help aid in the rehabilitation (revegetation of the area), and help prevent soil erosion while the area is recovering from the effects of the fire. Only cross-country travel would be eliminated and the negative impacts on OHV users would be minimal. In the long term, the successful revegetation of the burned areas would provide wildlife habitat and thereby provide increased opportunities for recreation.

B. Alternative 1 (No Action)

1. Cultural Resources

Under the No Action alternative there would not be impacts to cultural resources.

2. Noxious Weeds

Cheatgrass and noxious weeds would have a very high likelihood of invading the burned areas identified for seeding in the Proposed Action. Cheatgrass would become dominant, creating a landscape of decreased desirable plant cover and flashy fuels ready to be ignited again.

3. Special Status Species

Plants: Without seeding, nonnative invasive species would dominate the burned areas eliminating habitat for the known and suspected Special Status Species in this area.

Cumulative Impacts: Fires would increase in frequency and size which would increase the amount of cheatgrass-dominated areas. This would decrease available habitat for Special Status Species.

Wildlife: Not seeding the burned areas identified in the proposed action would cause negative impacts to sage-grouse and would not allow sage-grouse use in historical habitats for many years, if ever. Communities would continue to be dominated by annual cheatgrass/rabbitbrush and would not provide habitat for sage-grouse.

4. Soils

Without post-fire re-vegetation there is likely to be a loss of the well-rooted thatch roof, which holds the soil in place against the erosive forces of wind and water motion. Erosion is apt to diminish the dune deposits and dust catch for reduced nutrient re-supply and loss in water catch.

Without post-fire seeding the land is exposed to weed infestations. Cheatgrass would invade sites, and mine and deplete the limited nitrogen sources. Holes are apt to form in the landscape from diminished vegetation cover and decreased biological production and diversity.

Cumulative Impacts – No action is risk rich for weed invasion. A weedy annual cheatgrass invasion can lead to landscape scale nutrient depletion. As a flashy fuel, cheatgrass would burn more frequently causing a cumulative decline in soil nutrients and catchment functions.

5. Vegetation

Some of the burned area, especially at higher elevations, would most likely revegetate plants that were established before the fire with an increase in rabbitbrush. However, portions of the burned area within the Bacon Camp Fire (1986) boundary and at lower elevations would most likely return to cheatgrass, mustards, and other exotic annuals with much of these sites available for noxious weed invasion. These plants were in the area before the Big Juniper Fire where natives had not re-established after 15 years.

Cumulative Impacts - fires would increase in frequency and size which would increase the amount of cheatgrass-dominated area. Overall vegetation diversity would decline.

6. Watershed

The no action alternative would not achieve preburn conditions or would take many years to achieve preburn conditions without rest from livestock grazing for the Juniper Mtn. Complex Fires.

Cumulative Impacts - The cycle of fire and regrowth are part of this ecosystem. The site productivity would decrease if desired vegetation is not allowed to reestablish.

7. Wildlife

The no action alternative would have negative impacts to pronghorn and deer populations by not allowing use into historical habitats now dominated by cheatgrass/rabbitbrush.

8. Livestock Grazing Management

Although standard policy for burn recovery and vegetation reestablishment on burned areas is two growing seasons of rest, the no action alternative would leave the burned area open to grazing during the germination and establishment period. The new green growth on burned areas is attractive to grazing animals and they tend to forage on them until available vegetation is depleted.

Cumulative Impacts - Fires would increase in frequency and size which would increase the amount of cheatgrass-dominated area. Forage quality and availability would decline.

9. Recreation

The vehicle designation for the burned area within the proposed Juniper Mountain ACEC would continue to be "open" to cross-country vehicle use. The burned area would be easier to traverse with OHV's, which could result in increased erosion on the steeper slopes of Big Juniper Mountain. Recreation opportunities could be negatively impacted by increased fire frequency and lessened vegetation diversity due to the establishment of cheatgrass.

C. Alternative 2 (Fence Only)

1. Cultural Resources

Under Alternative 2, no known impacts to cultural resources would be expected.

2. Noxious Weeds

Fence construction activities would have little potential of introducing noxious weeds if equipment is inspected and cleaned and the seed is certified weed free, as per the protocols outlined in the narrative for the Proposed Action. Fence building activities would create soil disturbance areas where weed seeds transported from outside the rehabilitation area by wind, water, wildlife, and people could establish.

3. Special Status Species

Plants: Impacts would be the same as the proposed action.

Wildlife: This fence only alternative would create positive impacts to sage-grouse by protecting currently occupied habitats for two growing seasons from livestock use and help to better manage livestock use in future years but would not allow conversion of cheatgrass dominated historical habitats to useable shrub-steppe habitats.

4. Soils

Impacts would be the same as Alternative 1.

Cumulative Impact - would be the same as Alternative1. Fencing, as a regulation on grazing, may improve natural vegetation recovery with less soil decline.

5. Vegetation

Under the fence only alternative, there would be little reestablishment of native species in the lower elevation sites where the 1986 Bacon Camp Fire took place. Most of this burned area had a large component of cheatgrass which dominates after fire. Sagebrush nor perennial grasses do not reestablish in cheatgrass-dominated areas. Cheatgrass is highly flammable and would likely reburn within the next 5 to 10 years. This short return interval of fire would result in a community dominated by annual cheatgrass, mustard, and other associated exotic annuals. This is what happened in the area as a result of the 1986 fire. These sites would be open for invasion by noxious weeds and highly susceptible to recurring wildland fire as with the no action alternative.

The areas at higher elevations and where the Bacon Camp fire did not burn would have reestablishment of native species; however, the juniper would take a long period of time to replace the ancient stand present on Big Juniper Mountain. at the time of the fire. Fencing only would help in the management of grazing animals, but it would have little positive impacts on the vegetation.

Cumulative Impacts - would be the same as Alternative 1.

6. Watershed

The fence only alternative would achieve pre-burn conditions, but would take longer than with the seeding as stated in the proposed action for the Big Juniper and Jump fires. This alternative would achieve pre-burn condition at the same rate as the proposed action for the Mustang and Horsehead fires.

Cumulative Impacts - The cycle of fire and regrowth are part of this ecosystem. There would be no long term or cumulative impacts if recovery is allowed to occur.

7. Wildlife

This fence only alternative would create positive impacts to pronghorn and deer by protecting currently occupied habitats for a minimum of two growing seasons from livestock use and help to better manage livestock use in future years, but would not allow conversion of cheatgrass dominated historical habitats to useable shrub-steppe habitats

used by deer and pronghorn.

8. Livestock Grazing Management

The management would be as described in the proposed action.

Cumulative Impacts - would be the same as Alternative 1.

9. Recreation

Impacts would be the same as Alternative 1.

CHAPTER V. CONSULTATION AND COORDINATION

Jack Flynn, permittee
Joe Flynn, permittee
John Flynn, permittee
Con Fitzgerald, permittee
John Kiely, permittee
Cook Laird, permittee
John Taylor, permittee
Oregon Division of State Lands
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Craig Foster, Wildlife Biologist, ODFW

CHAPTER VI. LIST OF PREPARERS/REVIEWERS

A. Participating BLM Staff

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Vern Stofleth, Wildlife Biologist
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Paul Whitman, NEPA/Planning Coordinator
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CHAPTER VII. ESR PROJECT SUMMARY

Fire Name: Juniper Mountain Complex Fires	Big Juniper Mtn. Fire	Jump Fire	Mustang Fire	Horsehead Fire
Fire Number:	M-200	M-200	M-200	M-200
Fire Control Date:	9/03/01	8/10/01	8/25/01	8/19/01
Acres BLM Burned:	81,675	1,576	3,031	0
Start of Rehabilitation Project (Mo/Yr):	11/2001	01/2002	11/2001	11/2001
Completion of Rehabilitation Project (Mo/Yr):	03/2002	01/2002	03/2002	11/2001
Miles of Temporary Fence:	0	0	0	0
Miles of Permanent Fence:	25.5	0	3.5	0
No. of Soil/Watershed Structures:	none	none	none	none
Acres Reforestation:	none	none	none	none
Acres of Revegetation:	6,700	650	0	0
Acres of Burned Area Protected for Natural Regeneration:	80,000	1,576	3,000	0
Total Acres Rehabilitated:	80,000	1,576	3,000	0

Estimated Funding FY2001:	$18,442
Estimated Funding FY2002:	$1,009,446
Estimated Funding FY2003:	$47,751
Estimated Funding FY2004:	$47,751
Total Cost Rehabilitation Project for Juniper Mtn. Complex Fires:	**$1,123,090**

CHAPTER VIII. APPENDICES

Appendix 1 - Maps
Appendix 2 - Emergency Stabilization and Rehabilitation Plan
Appendix 3 - Native-Nonnative Plant Worksheet
Appendix 4 - Cost/Risk Analysis comparing proposed action and alternatives

APPENDIX 2
JUNIPER MOUNTAIN COMPLEX EMERGENCY FIRE REHABILITATION PLAN (M-200)

Item	Cost/Unit	Units	Total lbs seed (pls)	Total Cost	Funding Year Needed
Rangeland drill seeding					
Wyoming big sagebrush (bulk seed)*	$15.00/lb X1 lb/ac**	4,000 ac	4,000**	$60,000	2002
Bottlebrush squirreltail	$20.00/lb X 1 lb/ac	4,000 ac	4,000	$80,000	2002
Bluebunch wheatgrass	$12.00/lb X 1 lb/ac	4,000 ac	4,000	$48,000	2002
Hycrest crested wheatgrass	$ 1.50/lb X 2 lbs/ac	4,000 ac	8,000	$12,000	2002
Thurber's Needlegrass	$20.00/lb X 1 lb/ac	4,000 ac	4,000	$80,000	2002
Basin Wildrye	$11.00/lb X 1 lb/ac	4,000 ac	4,000	$44,000	2002
Lewis flax (appar)	$ 4.00/lb X .25 lb/ac	4,000 ac	1,000	$ 4,000	2002
Triticale	$ 1.00/lb X .25 lb/ac	4,000 ac	1,000	$ 1,000	2002
Drill seeding contract	$12.00/ac	4,000 ac		$48,000	2002
*sagebrush seed will be applied aerially in this drilling area					
**PLS = .25 lb/ac = 1000 lbs					
SUBTOTAL			**30,000**	**$377,000**	2002

Item	Cost/Unit	Units	Total lbs seed (pls)	Total Cost	Funding Year Needed
Aerial seeding					
Wyoming big sagebrush (bulk seed)	$15.00/lb X 1 lbs/ac*	3,350 ac	3,350	$ 50,250	2002
Forage kochia	$20.00/lb X 1 lb/ac	3,350 ac	3,350	$ 67,000	2002
Bottlebrush squirreltail	$20.00/lb X 1 lb/ac	3,350 ac	3,350	$ 67,000	2002
Bluebunch wheatgrass	$12.00/lb X 1 lb/ac	3,350 ac	3,350	$ 40,200	2002
Idaho Fescue	$18.00/lb X 1 lb/ac	3,350 ac	3,350	$ 60,300	2002
Basin wildrye (trailhead)	$11.00/lb x 1 lb/ac	3,350 ac	3,350	$36,850	2002
Aerial seeding contract: (includes sagebrush seed for 4,000 ac drilling area)	$ 5.00/ac	7,350 ac		$36,750	2002
*PLS = .25 lb/ac					
SUBTOTAL			**20,100**	**$358,350**	2002
Freight Costs (Hauling seed to and from mixer)				$ 5,000	
Seed testing Seed mixing	$ .10/lb		50,100 lbs	$ 1,000 $ 5,000	2002
SUBTOTAL				**$ 11,000**	

Item	Cost/Unit	Units	Total lbs seed	Total Cost	Funding Year Needed
Fence Construction (new)					
2 Cattleguards	$4000/ea			$ 8,000	2002
Materials	$ 900/mi	29 mi		$ 26,100	2002
Labor	$3,000/mi	29 mi		$ 87,000	2002
SUBTOTAL				**$121,100**	2002
Administrative Costs/Work Months (WM)					
ESR Plan Development	$ 6,000/WM	1 WM–2001		$ 6,000	2001
		1 WM–2002		$ 6,000	2002
Wildlife Guzzler Replacement	$ 5,000/ea	4 guzzlers		$ 20,000	2002
Cultural clearance contract				$ 52,000	2002
Project layout, contract preparation, and inspection	$ 5,000/WM	2 WM–2001		$ 10,000	2001
		2 WM-2002		$ 10,000	2002
Project Area Monitoring: 3 years	$ 6,000/WM	2 WM/year		$ 36,000	2002, 2003, 2004,
Weed inventorying, treatment & monitoring: 3 years	$ 3,500/WM for a crew of 3 people	9 WM/year		$ 94,500	2002, 2003,2004

Item	Cost/Unit	Units	Total lbs seed	Total Cost	Funding Year Needed
Vehicle cost (mileage): *Project layout: 2 mo each	$ .25/mi + $221/mo	4000mi/mo		$ 2,442	2001
	$ .21/mi + $296/mo	4000mi/mo		$ 2,272	2002
*Weed vehicle: 3 mo/year for 3 years	$ .29/mi + $257/mo	4000mi/mo		$ 12,753	2002, 2003, 2004
Equipment rental: *Local rangeland drills used for one third of drilling area	$2.50/ac + $250 maintenance fee	1,333 ac		$ 3,583	2002
*Hauling of Vale drills to drill site	$.54/mi	500 mi		$ 270	2002
*Hoist truck-unload drills	.40/mi	300 mi		$ 120	2002
SUBTOTAL				**$ 255,940**	
TOTAL				**$1,123,390**	

APPENDIX 3
NATIVE/NONNATIVE WORKSHEET

Proposed Native Plants in Seed Mixture

1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?
   X Yes ___ No Rationale: The native species selected have occurred on these ecological sites or are adapted to the included sites.

2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?
   X Yes ___ No Rationale: The native seed selected is available from the Boise seed warehouse and through private vendors.

3. Is the cost and/or quality of the native seed reasonable given the project size and Land Use and Rehabilitation Plan objectives and the guidance in BLM Manual 1745?
   X Yes ___ No Rationale: The cost of seed, along with drought tolerance, germination characteristics and ecological site were all considered in selection of native species. The drill seed species mix will not be seeded without crested wheatgrass (nonnative) to establish a ground cover of perennial species.

4. Will the native plants establish and survive given the environmental conditions and the current or future competition from other species in the seed mix or from exotic plants?
   X Yes ___ No Rationale: We expect the native species selected to survive environmental conditions if they can initially establish, however, they are likely to have less germination and establishment success than nonnative species.

5. Will the current or proposed land management (livestock, recreation use, wildlife populations, etc.) after the seeding establishment period maintain the seeded native plants in the seed mixture?
   X Yes ___ No Rationale: The area is managed under an adaptive rotational grazing, winter use, and rotational grazing which provides rest and controls timing and duration of grazing. Wildlife populations should not impact native species.

Proposed Nonnative Plants in Seed Mixture

1. Is the use of nonnative plants necessary to meet objectives, e.g., consistent with applicable land use/activity plans?
   X Yes ___ No Rationale: This is consistent with existing land use and activity plans. Hycrest crested wheatgrass and forage kochia are two species that will compete successfully with cheatgrass and noxious weeds and create a fire-resistant perennial cover.

2. Will nonnative plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?
   X Yes ___ No Rationale: The site will be dominated by cheatgrass, annual mustards, and possible noxious weed if not seeded. A native, nonnative mix of perennial species will allow ecological processes to function. Additionally, it is imperative to establish a perennial vegetation cover to stabilize use site.

3. Will nonnative plants stay on the site they are seeded and not significantly displace or interbreed with native plants?
   X Yes ___ No Rationale: The nonnative species selected will stay on-site and not interbreed and eventually more natives will enter the community once stabilized with a perennial community and the accelerated fire cycle is broken.

A "no" response requires additional analysis in the EA or selection of an alternate species in the seed mixture.

Proposed Seed Mixtures

Juniper Mountain Complex Fires

Nonnative Plants	Native Plants
Aerial Seed Mix	
1. Forage kochia	1. Wyoming big sagebrush 2. Bottlebrush squirreltail 3. Bluebunch wheatgrass 4. Idaho fescue 5. Basin wildrye
Rangeland Drill Mix	
1. Crested wheatgrass 2. Triticale	1. Wyoming big sagebrush 2. Bottlebrush squirreltail 3. Bluebunch wheatgrass 4. Thurber needlegrass 5. Basin wildrye 6. Lewis flax 7. Yarrow 8. Lupine 9. Petalostema

APPENDIX 4

COST/RISK ASSESSMENT

Part 1. Treatment Cost

Treatment	Cost
Revegetation (Seed tests, mixing, & application)	$ 746,350
Fence Construction, Materials, and Labor, Cattleguards	$ 121,100
All Other Costs (Administrative, Clearances, Weed Inventory, etc.)	$ 255,940
TOTAL	$ 1,123,390

Part 2. Probability of Rehabilitation Treatments Successfully Meeting Burned Area Emergency Stabilization and Rehabilitation Objectives

Treatments	Units	%
Drill Seeding	4,000 acres	80
Aerial Seeding	3,350 acres	80
Protective Fence to Exclude Grazing	29 miles	95

Part 3. Risk of Resource Value Loss or Damage

Alternative 1: No Action - Treatments Not Implemented (check one)

Resource Value	NA	None	Low	Mid	High
Unacceptable Loss of Topsoil				X	
Weed Invasion					X
Unacceptable Loss of Vegetation Diversity					X
Unacceptable Loss of Vegetation Structure					X
Unacceptable Disruption of Ecological Processes					X
Off-site Sediment Damage to Private Property	X				
Off-site Threats to Human Life		X			
Other	X				

Alternative 2: Fence Only Treatment (check one)

Resource Value	NA	None	Low	Mid	High
Unacceptable Loss of Topsoil				X	
Weed Invasion					X
Unacceptable Loss of Vegetation Diversity					X
Unacceptable Loss of Vegetation Structure					X
Unacceptable Disruption of Ecological Processes					X
Off-site Sediment Damage to Private Property	X				
Off-site Threats to Human Life		X			
Other	X				

Proposed Action - Treatments Successfully Implemented (check one)

Resource Value	NA	None	Low	Mid	High
Unacceptable Loss of Topsoil		X			
Weed Invasion			X		
Unacceptable Loss of Vegetation Diversity			X		
Unacceptable Loss of Vegetation Structure			X		
Unacceptable Disruption of Ecological Processes			X		
Off-site Sediment Damage to Private Property	X				
Off-site Threats to Human Life		X			
Other	X				

Part 4. Summary

1. Are the risks to natural resources acceptable as a result of the fire if the following actions are taken?

   Proposed Action X Yes ___ No

   Rationale for answer: The proposed seeding and protection fences are needed to establish a perennial vegetation cover, to stabilize soils and avoid repeat wildfire hazards.

No Action ___Yes X No

Rationale for answer: Reasons are listed above and if no action is done catastrophic wildfire may destroy habitat as well as the possibility of noxious weed invasion.

Alternative(s) X Yes ___ No

Rationale for answer: Same as proposed action.

2. Is the probability of success of the proposed action, alternatives or no action acceptable given their costs?

Proposed Action X Yes ___ No

Rationale for answer: Costs are not high given the comparison of degraded rangeland and future wildfire.

No Action ___Yes X No

Rationale for answer: The future costs of wildfire, site deterioration, soil loss, liability, and habitat losses make no action unacceptable.

Alternative(s) X Yes ___ No

Rationale for answer: Same as for proposed action.

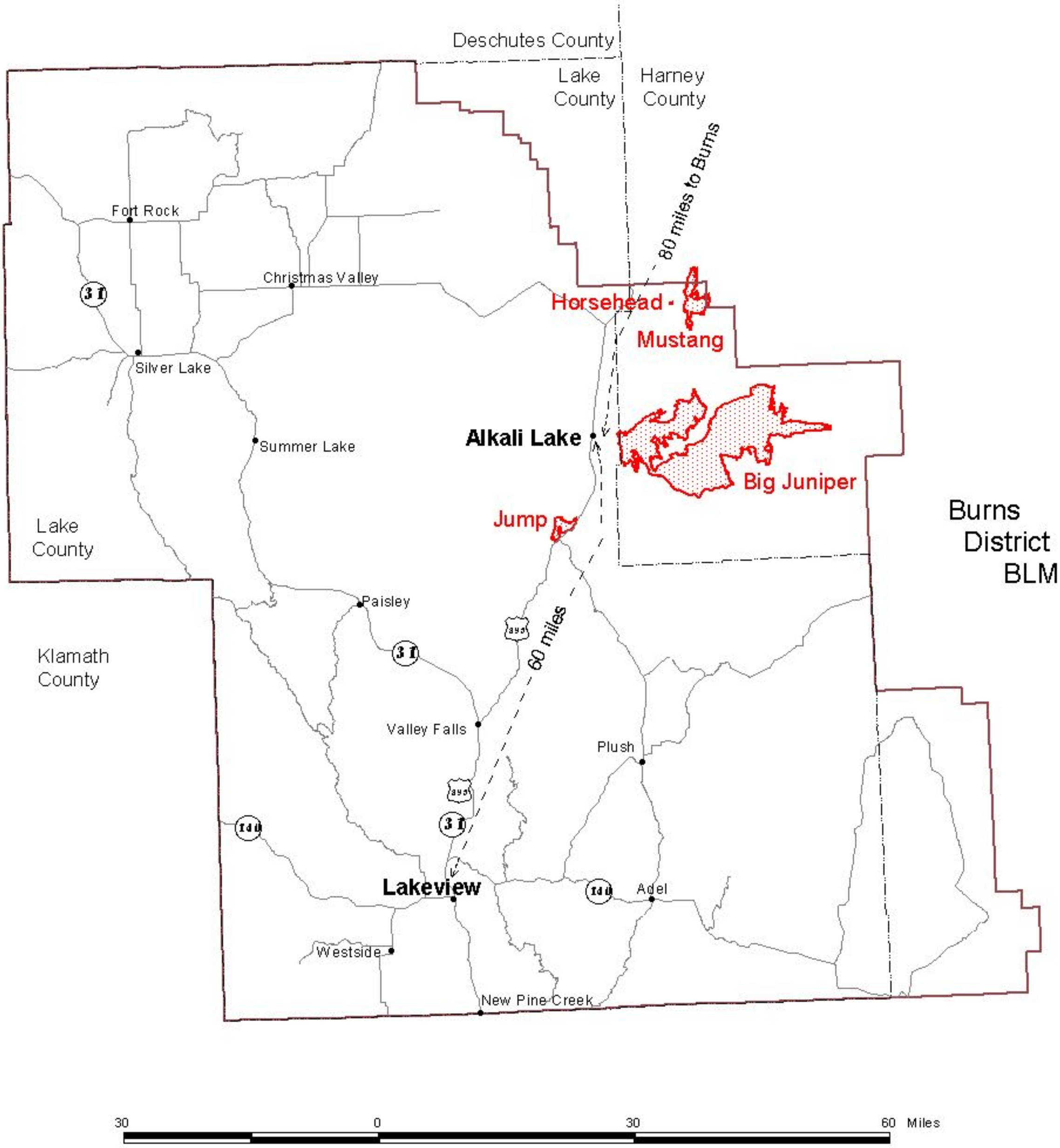
3. Which approach will most cost-effectively and successfully attain the ESR objectives and, therefore, is recommended for implementation from a Cost/Risk Analysis standpoint?

Proposed Action X, Alternatives(s) ___, or No Action ___

Comments: The present costs are modest when you consider the high probability of soil loss, loss of wildlife habitat, future wildfire, and noxious weed invasion without treatment.

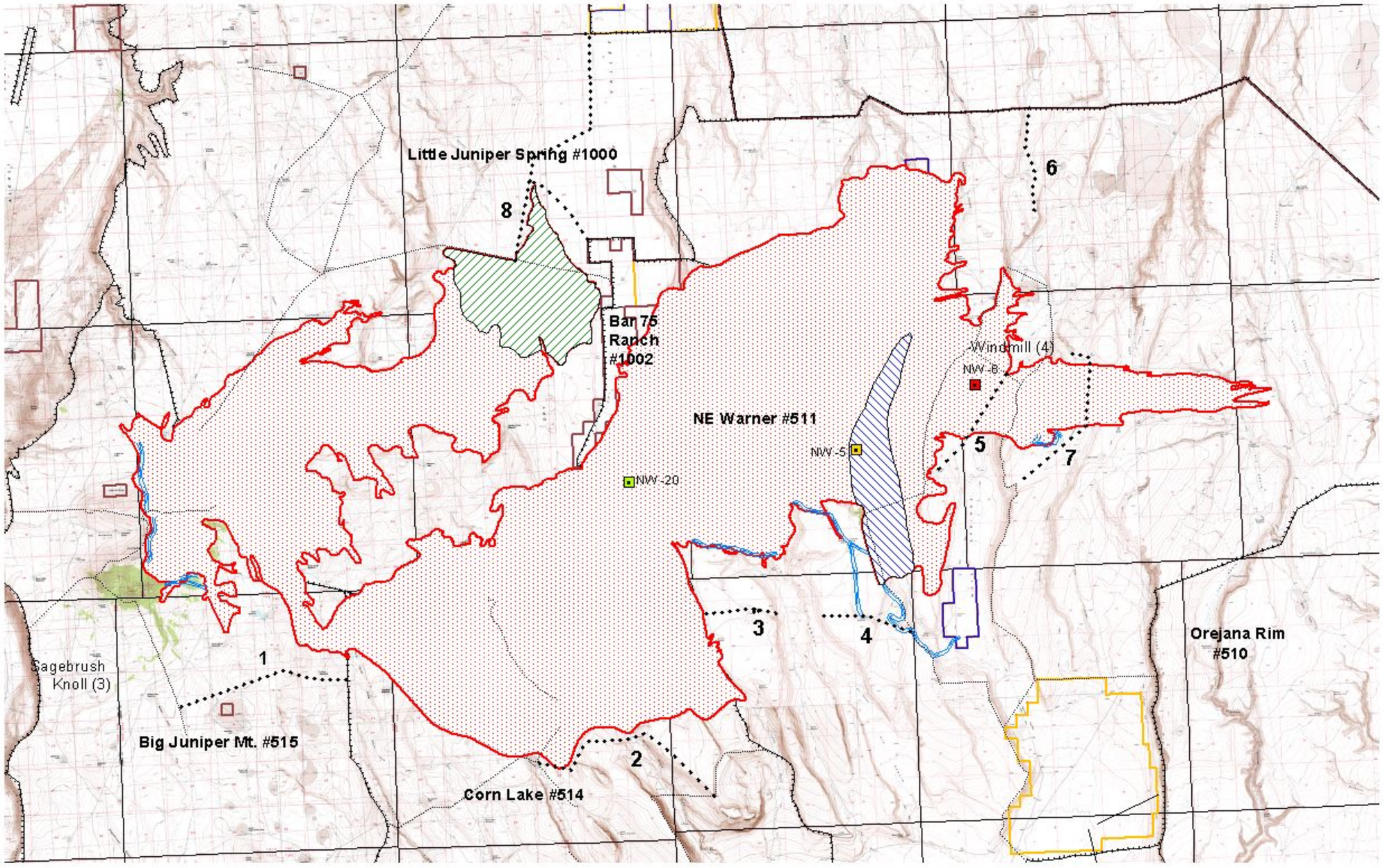
Juniper Mt. Complex Fires

August, 2001



Big Juniper Fire

Juniper Mt. Complex
August, 2001



Legend

- Proposed Permanent Fence
- Guzzlers
  - Horseshoe Rim
  - Juniper Draw
  - Mule Spring
- Pasture
- Treatment Areas
  - Dry Valley Seeding TA
  - Juniper Ridge Aerial TA
  - Cat line
  - Big Juniper Fire
- Allotment #
- Ownership
  - BLM
  - Private
  - State
- Township & Range

Fence Key

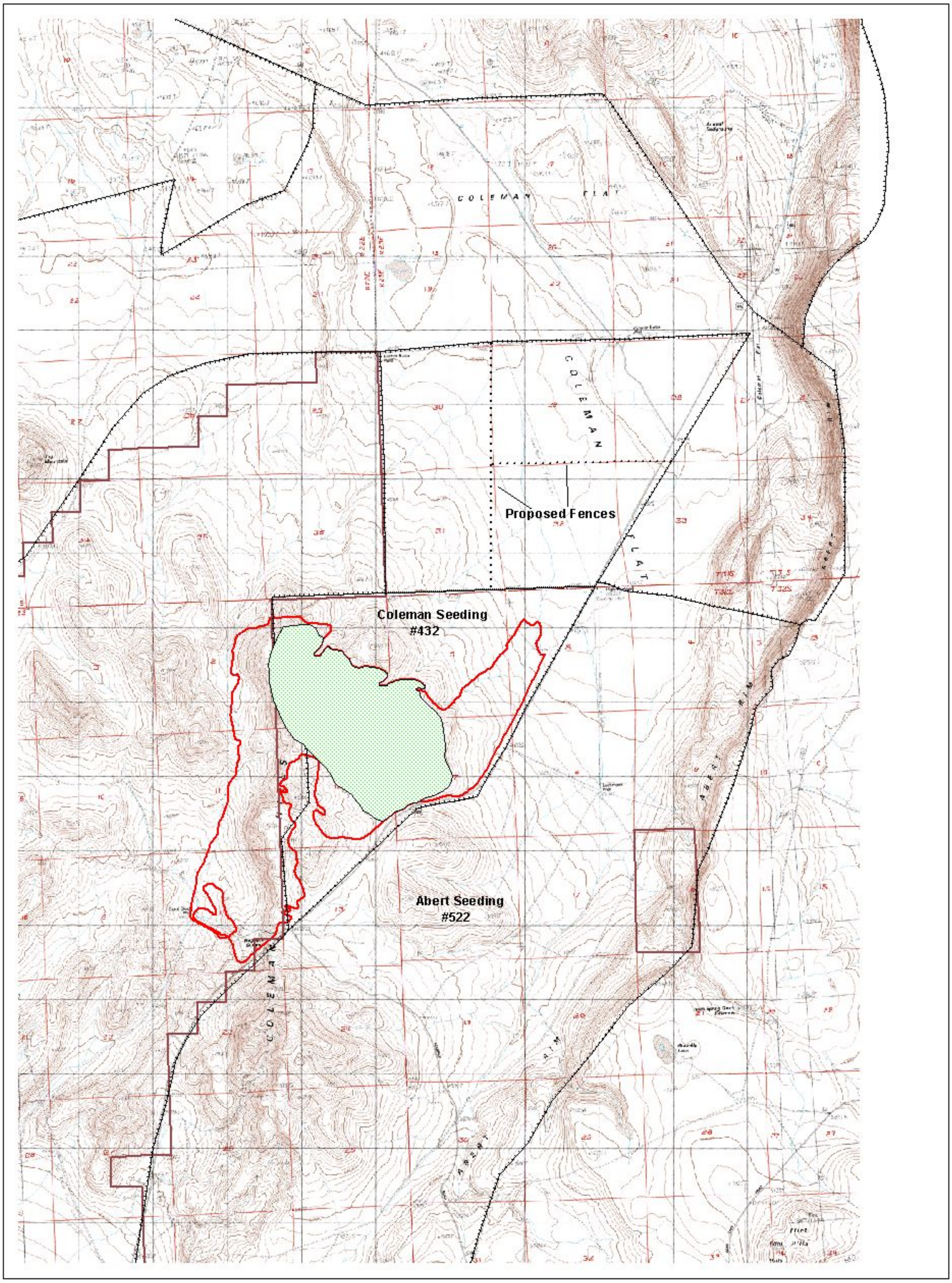
1 = Eagle Butte Division Fence
2 = Bacon Camp Rim Fence
3 = Sunrise Waterhole Fence
4 = Aspen Waterhole Fence
5 = Monahan Valley Fence
6 = Twin Bed Grounds Fence
7 = Brushy Valley Fence
8 = Dry Valley Fence

5 0 5 10 Miles

Lakeview District
Lakeview Resource Area

Jump Fire

Juniper Mt. Complex, August 2001



Legend

- Treatment Areas
  - Coleman Hills ATA
  - Allotment #
- Ownership
  - BLM
  - Private
  - State
  - Jump Fire

0.5 0 0.5 1 Miles

N
W E
S

Lakeview District
Lakeview Resource Area

Mustang Fire, Juniper Mt. Complex, August, 2001

Mustang Fire

Horse Head Fire

Little Juniper Spring
#1000

T28S

9

1 0 1 2 Miles

Legend

- Cat line
- Pasture (#)
- Allotment #
- Horsehead Fire
- Mustang Fire

Ownership Within Fires
- Public Domain
- State

Ownership
- Public Domain
- Private
- State
- Township & Range

Proposed Permanent Fence

9 = Horsehead Division Fence

N
W E
S

Lakeview District
Lakeview Resource Area